

Data Analysis and Generalizations

Module Planning Guide

The Learning Cycle

Activity	Teacher Materials	Student Materials	Standards Addressed	Process Skills
BRIEFING				
<ul style="list-style-type: none"> Catch a Piece of the Sun Solar Wind Catcher Summarizing Solar Wind 	<ul style="list-style-type: none"> Teacher Guide 	<ul style="list-style-type: none"> Student Text Student Activity Student Text 	Grades 9-12 <ul style="list-style-type: none"> Science As Inquiry 	
EXPLORATION				
<ul style="list-style-type: none"> Exploring Data A First Look 	<ul style="list-style-type: none"> Teacher Guide 	<ul style="list-style-type: none"> Student Text Student Activity 	Grades 9-12 <ul style="list-style-type: none"> Science As Inquiry Data Analysis and Probability 	<ul style="list-style-type: none"> Observation Inferences Communication Collecting data Interpreting data Questions
DEVELOPMENT				
<ul style="list-style-type: none"> Developing an Investigation Exploring Data A Closer Look at Solar Wind Regime Speeds A Closer Look 	<ul style="list-style-type: none"> Teacher Guide 	<ul style="list-style-type: none"> Student Text Model Student Activity Student Activity 	Grades 9-12 <ul style="list-style-type: none"> Science As Inquiry Data Analysis and Probability 	<ul style="list-style-type: none"> Questions Hypothesis Variables Procedures Collecting Data Analyzing Data Conclusions
INTERACTION/SYNTHESIS				
<ul style="list-style-type: none"> Revising an Investigation Peer Review Poster Rubric 	<ul style="list-style-type: none"> Teacher Guide 	<ul style="list-style-type: none"> Student Text Student Activity Student Activity 	Grades 9-12 <ul style="list-style-type: none"> Science As Inquiry History and Nature of Science Data Analysis and Probability 	<ul style="list-style-type: none"> Communication
ASSESSMENT				
<ul style="list-style-type: none"> A Different Perspective A Look From a Different Perspective 	<ul style="list-style-type: none"> Teacher Guide 	<ul style="list-style-type: none"> Student Activity 	Grades 9-12 <ul style="list-style-type: none"> Science As Inquiry Assessment C Data Analysis and Probability 	<ul style="list-style-type: none"> Questions Hypothesis Variables Procedures Collecting Data Analyzing Data Conclusions

(View a full text of the [National Science Education Standards](#).)

(View a full text of the [Principles and Standards for School Mathematics](#).)

(View a full text of McREL's [Compendium of Standards and Benchmarks for K-12 Education](#).)

Materials lists for each teacher guide in this module.

Listed below is a quick reference to all teacher guides included in this module along with a complete listing of each guide's materials, for your convenience.

Catch A Piece of the Sun

For each team:

- Student Text, "[Solar Wind Catcher](#)"
- Student Activity, "[Summarizing](#)"
- Student Text, "[Solar Wind](#)"
- Fact Sheet, "[The Genesis Mission: An Overview](#)"
- Fact Sheet, "[How Does Studying the Solar Wind Tell Us About the Origin of Planets](#)"

Exploring Data

For each team:

- Student Activity, "[A First Look](#)"
- Student Text, "[Exploring Data](#)"
- Data printout from one week of solar wind readings from the [LANL Web site](#)
- Data printouts for December 19-22, 2002, from the [LANL Web site](#)

Developing an Investigation

For each student:

- Student Text, "[Solar Wind](#)" (if you did not use this in "[Catch a Piece of the Sun](#)")
- Student Text, "[Exploring Data](#)"
- Model Student Activity, "[A Closer Look at Solar Wind Speeds](#)"
- Student Activity, "[A Closer Look](#)"
- Computer access to the [LANL Web site](#), or appropriate data printouts of solar wind summary plots from the [LANL Web site](#)

Revising an Investigation

For each team:

- Student Text, "[Peer Review](#)"
- Student Activity, "[Peer Review](#)"
- Student Activity, "[Poster Session Rubric](#)"
- Student investigation reports from the "Development" section

A Different Perspective

For each student

- Student Activity, "[A Look from a Different Perspective](#)"
- Computer access to the [LANL Web site](#) or appropriate data printouts of Electron Spin Angle Distribution Plots
- Solar Wind Summary Plots from the [LANL Web site](#)

Note to teachers: This "at-a-glance" planning guide is the result of classroom pilot test data. Please contact us at genesisepo@mcrel.org with further suggestions for improving this guide to best meet your classroom needs.